UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,546	12/18/2001	Moshe Ben-Chorin	P-4698-US	8134

49443 7590 09/05/2006

PEARL COHEN ZEDEK, LLP
1500 BROADWAY 12TH FLOOR
NEW YORK, NY 10036

EXAMINER	
POON, KING Y	

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/017,546	BEN-CHORIN ET AL.	
	Examiner	Art Unit	
	King Y. Poon	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-74* is/are pending in the application.

4a) Of the above claim(s) *1-46 and 59-74* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *47-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/20/2006*, 1/9/2006, 5/1/2006, 4/26/2006, 2/22/2006, 1/24/2003, 6/25/2002, 8/27/2003

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election without traverse of the restriction requirement in the reply filed on 6/20/2006 is acknowledged.

Applicant elects the species defined on page 13, line 3, specification and the primaries are reproduced using filters, page 26, lines 20-21.

Applicant indicates that claims 1-3, 6, 7, 9-12, 15-22, 25, 26, 28-35, 37, 38, 40, 42, 44, 45, 47, 48, 50-56, 58-67, 70-72, and 74 are generic.

MPEP 806.04 (d) states that a generic claim should require no material element additional to those required by the species claim.

Page 13, lines 3 states: According to an embodiment (species) of the present invention, there is provided a device for soft proofing image data of a plurality of colors for printing to form printed material, the device comprising: (a) a light source for producing light having a set of primary colors; (b) a converter for converting the image data to at least one of the set of primary colors according to at least one characteristic of the printed material to form converted data; (c) a controller for determining a combination of at least one of the set of primary colors according to the converted data for production by the light source; and (d) a viewing screen for displaying the image data according to the combination from the controller. Other number of primaries may be used. Such species is defined by claim 47.

Clearly, for example, claim 1 is claiming: "a display having a controller, and producing a set of transmission spectra by passing light through ink when on the

printing substrate." Those limitation is not included in species claim 47. Therefore, at least claim 1 and all of the claims that depend on claim 1 are not generic.

Applicant does not elect the species defined on page 13, line 13 which states: according to another (distinct) embodiment (species), there is provided, in a device for soft proofing image data of a plurality of colors for printing to form printed material, the device comprising a light source for producing light having a set of primary colors, a converter for converting the image data to at least one of the set of primary colors according to at least one characteristic of the printed material to form converted data, and a viewing screen for displaying the image according to the converted data, the light being projected onto the viewing screen, a method for creating the image for displaying, the method comprising the steps of: (a) determining at least one characteristic of the printed material according to at least one of a spectrum of a set of inks and a color reflection characteristic of a material for receiving the at least one ink; (b) producing light by the light source including a set of primary colors; (c) determining a path for light of each primary color according to the converted data; and (d) projecting the light of each primary color according to said path onto the viewing screen to form the image. Such species is defined by claim 59.

Applicant's specification admits that claim 47 and claim 59 belongs to two different species, claims 59 and 47 cannot be generic claims. Both 47 and 59 are species claims claiming different species.

Similarly, claims 60-62 represents the species disclosed on page 14, line 3.

Therefore, it appears applicant has erroneously identifying generic claims and claims that readable on the elected species.

Claims 47-58 clearly representing the elected species and when species claims are considered, all generic claims and claims that readable on claims 47-48 are automatically considered also (as for as prior art search and prior art rejection).

Since applicant in both restriction requirement has not correctly identify the claims the readable on the elected species, the examiner has no choice but examine only claims that the examiner believed represented the elected species.

According, claims 47-58 are being examined; claims 1-46, 59-74 has been withdrawn from consideration.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 47-49, 52-58 and claims that readable on claims 47-49, 52-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lind et al (US 5,999,153) in view of Conner et al (Re 36,654).

Regarding claim 47 (and claims readable on claim 47): Lind teaches a device (fig. 1) for soft proofing (column 2,lines 25-35) image data for printed material, the device comprising: (a) a light source (column 4,lines 65-67) for producing light having at least four primary colors (see table, column 6, Conner); (b) a converter (computer 13 that converts image data to data that controls the display, or the control of the display that takes the signal of the computer and converts to the one of the color, column 4,lines 25-32) for converting the image data to at least one of said at least four primary colors according to at least one characteristic of the printed material (column 4,lines 8-20) to form converted data; (c) a controller (the control of the display that selects a filter, column 4, lines 14-20, column 14, lines 25-30, 22, 23, fig, 3, fig. 4) for determining a proportion (column 4, lines 32-35) at least one of said at least four colors according to said converted data for production by said light source; and (d) a viewing screen (the display area that is illuminated by the light, column 4, lines 65-67, also see column 16, line 67, Conner, it is well known in the art that a LCD display has a viewing screen) for displaying the image data according to said proportion from said controller.

Lind does not disclosed how many primaries that his system using white light as light source is capable of producing.

Conner, in the same area of LCD display, teaches white light used in a LCD system, inherently can produced at least 4 primaries (R, G, B, C, M, Y) (see table 1, column 6, also see column 7, lines 30-40 that a black filter is added to increase contrast).

Therefore, it would have been obvious to a person with ordinary skill in the art to produce light of all color possible including at least four primaries (the more the better) in the system of Lind such that the printed material is accurately displayed with enhanced contrast.

Regarding claim 48 (and claims readable on claim 48): Connor teaches it is well known in the art that LCD display comprising: (e) a projector for projecting light of said at least four primary colors onto said viewing screen according to said proportion (column 16, lines 60-67).

Regarding claim 49 (and claims readable on claim 49): Lind and Connor teaches wherein said light source comprises: (i) a polychromatic source (white light, column 4,lines 65-67, Lind); and (ii) at least four color filters (column 3, line 67, Lind, table 1, column 6, Connor), each color filter corresponding to an ink transmission spectra (column 4,lines 15-20, Lind).

Regarding claim 52 (and claims readable on claim 52): Lind teaches wherein said at least one characteristic of the printed material is determined according to a transmission spectrum of a combination of inks (column 4, lines 15-20).

Regarding claim 53 (and claims readable on claim 53): Lind teaches wherein said light source for producing light having at least four primary colors is selected such that a spectrum of said light having at least four primary colors is matched to said at least a portion of a spectrum of a combination of inks (column 4,lines 15-20).

Regarding claim 54 (and claims readable on claim 54): Lind teaches, wherein said at least one characteristic of the printed material is determined according to a color

reflection characteristic of a material for receiving said combination of inks (column 4, lines 40-46, match ink on paper, inherently, the illumination condition of the paper determines the spectral of ink on paper).

Regarding claim 55 (and claims readable on claim 55): Lind teaches wherein said at least one characteristic of the printed material is determined according to a spectrum of a combination of inks (column 4,lines 15-20), and wherein a brightness of said light (column 4, lines 30-45, change the brightness of light would increase the color gamut available to the system to match the spectral of ink on paper; inherently, the illumination condition of the paper determines the spectral of ink on paper) having at least four primary colors is adjusted according to illumination conditions for said material for receiving said combination of inks.

Regarding claim 56 (and claims readable on claim 56): Lind teaches the device of claim 47, further comprising a white light source (column 4, lines 65-67) for producing white light, wherein said illumination conditions are adjusted according to an amount of said white light being produced (column 4, lines 35-40).

Regarding claim 57 (and claims readable on claim 57): Lind teaches the device of claim 47, further comprising: (e) a polychromatic light source (column 4, lines 65-67); and (i) a plurality of filters (column 3,lines 65-67) for filtering light from said polychromatic light source for producing said light having at least four primary colors (column 4, lines 25-30, column 6, of Connor); wherein said at least one characteristic of the printed material is also determined according to a spectrum of at least one ink (column 4, lines 15-18), and said filtered light is adjusted (column 4, lines 30-35)

according to a density of said at least one ink compared to said filters (column 4, lines 15-18).

Regarding claim 58 (and claims readable on claim 58): Lind teaches wherein a saturation of said light having at least four primary colors is adjusted (column 4, lines 30-45, change the brightness of light would increase the color gamut available to the system to match the spectral of ink on paper; inherently, the illumination condition of the paper determines the spectral of ink on paper) according to a gloss of said material, said material for receiving at least one ink.

4. Claim 50 (and claims readable on claim 50) is rejected under 35 U.S.C. 103(a) as being unpatentable over Lind et al (US 5,999,153) in view of Conner et al (Re 36,654), as applied to claim 47 above, and further in view of Wang (US 6,278,540).

Lind does not teach wherein said projector comprises a spatial light modulator for determining a path of light of each primary color.

Wang, in the same area of LCD display, teaches it is well known in the art that a projector of LCD comprises a spatial light modulator (column 4,lines 65-67, column 5, lines 1-15, column 5, lines 30-35) for determining a path of light (fig. 4) of each primary color.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Lind to include: said projector comprises a spatial light modulator for determining a path of light of each primary color, to improve image resolution as taught by Wang, column 5, lines 25-30.

5. Claim 51 (and claims readable on claim 51) is rejected under 35 U.S.C. 103(a) as being unpatentable over Lind et al (US 5,999,153) in view of Conner et al (Re 36,654), as applied to claim 47 above, and further in view of Gransden et al (US 6,404,970).

Regarding claim 51: Lind teaches to control the brightness of light of the at least four primary colors (also see discussion of claim 47).

Lind does not teach to use a continuously variable neutral density filter for controlling brightness of said light of said at least four primary colors.

Gransden teaches it is well know in the art to use a continuously variable neutral density filter for controlling brightness of a light (column 1, lines 37-45).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Lind to include: use a continuously variable neutral density filter for controlling brightness of said light of said at least four primary colors.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Lind by the invention of Gransden because: a) it would provide a less complex and less cost system for Lind as taught by Gransden at column 2, lines 15-17, and b) it would have perform satisfactorily, column 1, line 61.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is 571-272-7440. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 28, 2006

KING Y. POON
PRIMARY EXAMINER